REMARKS

Claims 1-3, 5-13, 15-18, 20-23 and 25-45 are all the claims pending in the application. Claims 1, 3, 7, 9-10, 12-13, 17-18, 22-23, 26-27, 29-30, and 32-34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,915,018 (hereinafter, "Tajime") as set forth in the previous Office Action dated 12/22/06. Claims 5-6, 8, 11, 15, 16, 20, 21, 25-26, 28, 31, 36-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Applicant submits the following in traversal.

Rejection of claims 1, 3, 7, 9-10, 12-13, 17-18, 22-23, 26-27, 29-30, and 32-34 under §103(a) over Tajime

In the Office Action, the Examiner continues to reject claim 1 as being obvious over Tajime. In response to our arguments, the Examiner maintains that the complexity measure computing means 101 teaches the claimed complexity estimation unit which calculates complexity of a picture to be currently encoded using complexity of decoded previous and current picture output from the video decoding unit. Applicant respectfully disagrees.

First, Applicant respectfully submits that i) the picture group complexity measure in a plurality of pictures *Xp* and ii) the complexity measure in all pictures *Xt* in column 8, lines 11-18 of Tajime fail to teach the complexity measure for both the decoded previous picture and the decoded current picture.

Tajime discloses the calculation of *Xp* through equations (1)-(3):

$$Qop = \sum_{j=1}^{Np \times Nmb} Qoj \qquad (1)$$

$$Sop = \sum_{j=1}^{Np \times Nmb} Soj \qquad (2)$$

$$Xp = \frac{Qop \times Sop}{Np^2 \times Nmb} \qquad (3)$$

As explained in column 8, lines 51-61, *Qop* is the quantizer step size cumulative value for all macroblocks of the group of pictures and *Sop* is the number of bits cumulative value for all macroblocks of the group of pictures. The *Qop* and the *Sop* are then used in equation 3 to calculate the picture group complexity measure in the plurality of pictures *Xp*. In other words, a single value *Xp* is calculated for all of the plurality of pictures.

For example, if there are only two pictures in the plurality of pictures, i.e., a previous picture and a current picture, Tajime teaches calculating a single complexity measure using the quantizer step size cumulative value of the macroblocks of the previous and the current pictures and the number of bits cumulative value of the macroblocks of the previous and the current pictures. Tajime does not teach separately calculating the complexity of the previous picture and the complexity of the current picture. In other words, Tajime does not teach the calculation of one complexity measure for the previous picture and the calculation of another complexity measure for the current picture. Rather, Tajime teaches a single value, *Xt*, that represents the complexity measure in all pictures.

In view of the above, Applicant submits that Tajime cannot possibly teach a complexity estimation unit which calculates complexity of a picture to be currently encoded, using complexity of decoded previous and current pictures output from the video decoding unit, in combination with other elements of claim 1.

Second, Applicant submits that claim 1 is patentable because a prima facie case of obviousness has not been established. In the Office Action, that Examiner states that it would have been obvious to combine the teachings of the first embodiment (calculating complexity of decoded pictures) and the second embodiment (calculating complexity of re-encoded pictures). Applicant respectfully disagrees.

In *KSR Int'l v. Teleflex, Inc.*, the Supreme Court held that "a combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." 500 U.S. ___, No. 04-1350, slip op. at 4 (April 30, 2007). Here, the Office Action does not explain how the complexity measure computing means 101 would calculate the claimed complexity of a picture to be currently encoded, using complexity of decoded previous and current pictures output from the video decoding unit and complexity of an encoded previous picture output from the video encoding unit.

In an exemplary embodiment, Equation 3 in on page 13 of the Applicant's specification discloses a way to calculate the complexity value using the complexity of the decoded current picture, the complexity of the decoded previous picture, and the complexity of the previous picture after encoding.

In contrast, Tajime does not show, nor does the Office Action provide, any explanation of how the complexity measures from the decoded pictures and the complexity of the re-encoded

pictures would be combined. Without any explanation, the combination of the first and second embodiments do not yield any predictable results to render claim 1 obvious.

For reasons similar to those submitted for claim 1, claims 9, 12, 17, 22, 29 and 32-34 are patentable.

Claims 3 and 7, which depend from claim 1, claim 10, which depends from claim 9, claim 13, which depends from claim 12, claim 18, which depends from claim 17, claims 23 and 27, which depend from claim 22, and claim 30, which depends from claim 29, are patentable for at least the reasons submitted for their respective base claims.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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